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EXAMINER

POON, KING Y

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 04/21/2004

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/521,723

Applicant(s)

MAZZA, SAM

Examiner

King Y. Poon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-8 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-8 and 10-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/26/2004 and 3/1/2004 has been entered.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
3. The disclosure is objected to because of the following informalities: interpreter 111 should be interpreter 114 on page 4, line 21. See drawings and page 5, lines 12-13, specification.

Appropriate correction is required.

Note: the amendment filed on 1/26/2004 would not been entered because it is non-compliant.

It is acknowledged that page 2 of the not entered amendment has amended the specification and title. The amended specification and title would be accepted if it is submitted with a compliant response to this office action.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kageyama et al. (US 5,303,336) in view of Kyle (US 6,141,681).

Regarding claim 1: Kageyama teaches a method of presenting data (document data, column 4, lines 45-51) to a viewing entity (print server 14, column 4, lines 52-55) having a viewer, (command processing part, 163, column 6, lines 43-47) comprising the steps of: providing unformatted data (non converted document data, that is transmitted from terminals, column 4, lines 46-51, which is to be converted, column 8, lines 11-20) to the viewing entity, (print server 14, column 4, lines 52-55) the data comprising one or more unformatted data portions (e.g., 1521, 1522, column 4, lines 55-60) to be converted into a format (the format of the common command of the document data, column 8, lines 10-20, converted from printing command) viewable (executable by the command processing part, column 8, lines 11-16, column 6, lines 43-47) to the viewer; providing a plurality of formatters, (command conversion programs corresponding to the different printing protocols of the print data, column 8, lines 15-20, column 6, lines 32-34) for the viewer, each of which is capable of formatting one or more of the unformatted data portions into the format viewable to the viewer; locating the formatters by the viewer for each of the unformatted data portions (since the command

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conversion/interpretation is carried out by the command processing part using prepared conversion programs corresponds to different printing protocols, column 8, lines 11-20, the command processing part must first locate the program before the command processing part can use the program; also see column 6, lines 32-50, and column 7, lines 60-65), said formatters plug-able into the viewer (the viewer/command processing program runs the command conversion program/formatter; therefore, the formatter/command conversion program is plugged into the viewer/command processing program); and formatting (converted, column 8, line 14) each of the unformatted data portions (e.g., document data 1521, 1522, column 6, lines 26-35) by the located formatters (conversion program, column 8, line 17) to the format (the format of the common command, column 8, line 16; since the common command is converted from the printing command; inherently, the common command and the printing command are in different data format) viewable to the viewer (command processing part, column 8, lines 13, column 6, lines 43-47).

Kageyama does not teach the command processing part, in the first embodiment, is implemented in software. (Column 3, lines 17, specification of this application defines the viewer is implemented in software)

However, Kageyama, in column 16, lines 1-5, fifth embodiment, teaches the command processing part is preferably composed of a program/software, and the program can be used to run other program such as the character code processing program (Column 15, lines 59-68).

Since Kageyama teaches a program is used because the program can be extended/added function (extensibility, column 16, line 2; for example, command processing part is added with a character code processing functions by running a character code processing program, column 15, lines 59-68), and the command processing part, in the first embodiment of Kageyama runs another program/command conversion program in the command processing part; it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's command processing part to include: implementing the command processing part of Kageyama using software to run the command conversion program.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's command processing part because of the following reasons: (a) it would have allowed the command processing part to be extended by the command conversion program; (b) replacing a defective hardware cost more compare to downloading software because once the software is created, it would be downloaded multiple times, while broken hardware must be replaced with new ones each time; and (c) it is much easier to update the software, such as downloading the updated software from the Internet, compares to upgrading the hardware.

Kageyama also does not teach providing, together with the unformatted data portions, the plurality of formatters.

Kyle, in the same area of sending data, from a computer system to another computer system, to be formatted by the another computer system, teaches together

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with the unformatted data portions, (420, fig. 4) a plurality of formatters (416, fig. 4) for formatting the unformatted data portions.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's method of formatting data to include: providing, together with the unformatted data portions, the plurality of formatters.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's method of formatting data by the teaching of Kyle because of the following reasons: (a) it would have prevented the computer of Kageyama from "hang" when the computer doesn't have the formatter prepared for formatting the data received as taught by Kyle at column 1, lines 52-60; and (b) it would have prevented the formatter from consuming Kageyama's computer resources as taught by Kyle at column 2, lines 1-6.

Regarding claim 2: Kageyama teaches a step of providing identifiers (identifiers, column 4, lines 46-51, column 6, lines 32-35) for each of the unformatted data portions (e.g., document data 1521 and 1522, column 6, lines 32-35); and using the identifier to locate the formatters (the command processing part 163 discriminates protocol identifier in the data, column 5, lines 1-5, and process the print command of the data using conversion program corresponds to the identified protocol, column 8, lines 11-21).

Regarding claim 3: Kageyama teaches wherein the identifiers (identifiers, column 4, lines 46-51, column 6, lines 32-35) comprises tags (inherent properties of an

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identifiers) included in the data portions (e.g., document data 1521 and 1522, column 6, lines 32-35).

6. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kageyama et al. (US 5,303,336).

Regarding claim 11: Kageyama teaches a system (print server 14, column 5, line 17) for formatting (converting, column 8, lines 12-15) unformatted data (document data before conversion, column 8, lines 13-15) having one or more unformatted portions (document data 1521, 1522, column 6, lines 25-30) to be viewable (executable by the command processing part, column 8, lines 11-16, column 6, lines 43-47) to a viewer, (command processing part, column 8, line 13) comprising: conversion means (command conversion programs, column 8, lines 15-20, and the memory that store the command conversion means; inherently a program is located in a memory) for converting the unformatted data portions (document data before conversion, column 8, lines 13-15, e.g., document data 1521, 1522, column 6, lines 25-30) into a format (the format of the common command, column 8, lines 14-15; since the common command is converted from the printing command; inherently, the common command and the printing command are in different data format) viewable to the viewer, identifying means (printing protocol discriminating means, column 5, lines 1-3) for identifying each of the unformatted data portions (column 6, lines 32-35); and locating means (the command processing part identifies the printing protocol, column 5, lines 1-5, and the command conversion is carried out, in the command processing part, by using different command

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conversion programs corresponding to the identified printing protocol, column 8, lines 10-20; therefore, the command processing part must have a function part that locates the memory location of the memory where the program is being stored) for the viewer, by using the identifying means, (printing protocol discrimination part, column 5, lines 1-3) to locate the conversion means (command conversion programs, column 8, lines 15-20, and the memory that stores the command conversion means) for each of the unformatted data portions (document data 1521, 1522, column 6, lines 25-30).

Kageyama does not teach the command processing part, in the first embodiment, is implemented in software. (Column 3, lines 17, specification of this application defines the viewer is implemented in software)

However, Kageyama, in column 16, lines 1-5, fifth embodiment, teaches the command processing part is preferably composed of a program/software, and the program can be used to run other program such as the character code processing program (Column 15, lines 59-68).

Since Kageyama teaches a program is used because the program can be extended/added function (extensibility, column 16, line 2; for example, command processing part is added with a character code processing functions by running a character code processing program, column 15, lines 59-68), and the command processing part, in the first embodiment of Kageyama runs another program/command conversion program in the command processing part; it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified

Kageyama's command processing part to include: implementing the command processing part of Kageyama using software to run the command conversion program.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's command processing part because of the following reasons: (a) it would have allowed the command processing part to be extended by the command conversion program; (b) replacing a defective hardware cost more compare to downloading software because once the software is created, it would be downloaded multiple times, while broken hardware must be replaced with new ones each time; and (c) it is much easier to update the software, such as downloading the updated software from the Internet, compares to upgrading the hardware.

Kageyama also does not teach the conversion means being separately located from the viewer.

However, Kageyama, fig. 4, teaches command processing programs (16A1-16A3) run by the viewer/command processing part (163a) are being separately located from the viewer to reduce the memory requirement of the command processing part. (Column 9, lines 10-16, column 9, lines 40-45)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's command processing part to include: the conversion means being separately located from the viewer.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's command processing part

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because of the following reasons: (a) it would have reduced the memory requirement for storing the command processing part/software, and (b) reduce in memory would reduce the cost of implementing the viewer.

Regarding claim 12: Kageyama teaches wherein the conversion means (command conversion programs, column 8, lines 15-20, and the memory for storing the command conversion means) comprises a plurality of formatters, (command conversion programs, column 8, lines 15-20) each of which is capable of converting at least one of the unformatted data portions (document data, e.g., 1521, 1522, column 6, lines 25-30) into the format. (The format of the common command, column 8, lines 10-20)

Regarding claim 13: Kageyama teaches wherein the formatters are plug-able in the viewer. (As discussed in claim 11, the viewer/command processing program runs the command conversion program/formatter; therefore, the formatter/command conversion program is plugged into the viewer/command processing program).

Regarding claim 14: Kageyama teaches wherein the identifying means comprises a plurality of tags (e.g., identifiers 1521a and 1522a, column 6, lines 32-35) each of which identifies one of the data portions. (E.g., 1521 and 1522, column 6, lines 32-35)

7. Claims 6-8, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kageyama et al (US 5,303,336) in view of Nagasaka (US 5,511,156).

Regarding claim 6: Kageyama teaches a method of presenting data (document data, column 4, lines 45-51) to a viewer (command processing part, 163, column 6,

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lines 43-47), comprising the steps of: providing unformatted data (non converted document data, that is transmitted from terminals, column 4, lines 46-51, which is to be converted, column 8, lines 11-20) to the viewer, the unformatted data including a plurality of unformatted data portions (e.g., the unconverted data 1521, 1522, column 6, lines 25-35); providing a plurality of formatters, (conversion programs, column 8, lines 10-20) each of which is capable of formatting one or more unformatted data portions (printing command in the document data, column 8, lines 10-15) into at least one format (the format of the common command, column 8, lines 15-17; since the common command is converted from the printing command; inherently, the common command and the printing command are in different format) viewable (executable by the command processing part, column 8, lines 11-16, column 6, lines 43-47) to the viewer; locating (since the command conversion/interpretation is carried out by the command processing part using prepared conversion programs corresponds to different printing protocols, column 8, lines 11-20, the command processing part must first locate the program before the command processing part can use the program; also see column 6, lines 32-50, and column 7, lines 60-65) by the viewer, for each unformatted data portion (e.g., the document data, column 8, lines 11-16, that is to be converted) to be viewable (executable by the command processing part, column 8, lines 11-16, column 6, lines 43-47) to the viewer, a formatter (the command conversion program corresponds to the protocol of the document data, column 8, lines 15-21, column 6, lines 32-35) capable of converting the each unformatted data portion to a format (the format of the common command, column 8, lines 14-16) viewable (executable by the command processing

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part, column 8, lines 11-16, column 6, lines 43-47) to the viewer (command processing part, column 8, line 13); and formatting (converting, column 8, line 14) each unformatted data portion (e.g., the document data, column 8, lines 11-16, that is to be converted) by the located formatter (the conversion program that is being used, column 8, lines 15-21) to the format viewable (executable by the command processing part, column 8, lines 11-16, column 6, lines 43-47) to the viewer.

Kageyama does not teach the command processing part, in the first embodiment, is implemented in software. (Column 3, lines 17, specification of this application defines the viewer is implemented in software)

However, Kageyama, in column 16, lines 1-5, fifth embodiment, teaches the command processing part is preferably composed of a program/software, and the program can be used to run other program such as the character code processing program (Column 15, lines 59-68).

Since Kageyama teaches a program is used because the program can be extended/added function (extensibility, column 16, line 2; for example, command processing part is added with a character code processing functions by running a character code processing program, column 15, lines 59-68), and the command processing part, in the first embodiment of Kageyama runs another program/command conversion program in the command processing part; it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's command processing part to include: implementing the command processing part of Kageyama using software to run the command conversion program.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's command processing part because of the following reasons: (a) it would have allowed the command processing part to be extended by the command conversion program; (b) replacing a defective hardware cost more compare to downloading software because once the software is created, it would be downloaded multiple times, while broken hardware must be replaced with new ones each time; and (c) it is much easier to update the software, such as downloading the updated software from the Internet, compares to upgrading the hardware.

Kageyama also does not teach presenting data to a plurality of viewers such that all of the unformatted data portion can be formatted at relevant viewers.

Nagasaka, in the same area of formatting data (converting intermediate code into raster image, column 7, lines 5-10) portions (column 6, lines 59-60) using a viewer (PDL parallel processing interpreter, column 29, lines 50-52, column 5, lines 43-50) running other programs (e.g., rasterizer 212, column 7, lines 9, column 5, lines 43-45) used to format the unformatted data, (intermediate code) teaches sending data portions (intermediate code portions, column 6, lines 59-60) to a plurality of viewers (PDL parallel processing interpreter, column 6, lines 1-67, column 7, lines 1-4) such that all of the unformatted data portion (intermediate code portions) can be formatted at relevant viewers (Column 7, lines 5-15) at the same time. (Column 6, lines 25-30)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's presenting data method

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to include: presenting data to a plurality of viewers such that all of the unformatted data portion can be formatted at relevant viewers at the same time.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's data presenting method by the teaching of Nagasaka because of the following reasons: (a) it would have allowed Kageyama's data processing to realize a high speed and high density processing, as taught by Nagasaka at column 2, lines 18-20, especially when the viewer is implemented in software, Nagasaka, column 2, lines 5-17; and (b) it would have reduced the memory required to store the formatted data for the viewer as taught by Nagasaka at column 2, lines 20-27.

Regarding claim 7: Kageyama teaches a step of providing a plurality of identifiers (identifiers 1521a, 1522a, column 6, lines 32-35) each of which identifies one of the data portions (1521 and 1522, column 6, lines 32-35); and using the identifiers of the data portions to locate the formatter (the command processing part 163 discriminates protocol identifiers in the data, column 5, lines 1-5, and process the print command of the data using conversion program corresponds to the identified protocol, column 8, lines 11-21).

Regarding claim 8: Kageyama teaches wherein the identifiers (identifiers 1521a, 1522a, column 6, lines 32-35) are tags (identifiers are tags) included in relevant data portions (1521 and 1522, column 6, lines 32-35).

Regarding claim 10: Kageyama teaches wherein the formatters are plug-able into each of viewers that locates them. (As discussed in claim 6, the viewer/command

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processing program runs the command conversion program/formatter; therefore, the formatter/command conversion program is plugged into the viewer/command processing program).

Response to Arguments

With respect to applicant's argument that neither Kageyama nor Kyle teaches providing unformatted data to be converted into a format viewable by the viewer and providing a plurality of formatters plug-able to the viewer together with the unformatted data portions, has been considered.

In reply: Kageyama teaches a method of presenting data (document data, column 4, lines 45-51) to a viewing entity (print server 14, column 4, lines 52-55) having a viewer, (command processing part, 163, column 6, lines 43-47) comprising the steps of: providing unformatted data (non converted document data, that is transmitted from terminals, column 4, lines 46-51, which is to be converted, column 8, lines 11-20) to the viewing entity, (print server 14, column 4, lines 52-55) the data comprising one or more unformatted data portions (e.g., 1521, 1522, column 4, lines 55-60) to be converted into a format (the format of the common command of the document data, column 8, lines 10-20, converted from printing command) viewable (executable by the command processing part, column 8, lines 11-16, column 6, lines 43-47) to the viewer; providing a plurality of formatters, (command conversion programs corresponding to the different printing protocols of the print data, column 8, lines 15-20, column 6, lines 32-

34) for the viewer, said formatters plug-able into the viewer (the viewer/command processing program runs the command conversion program/formatter; therefore, the formatter/command conversion program is plugged into the viewer/command processing program)

Kageyama does not teach providing, together with the unformatted data portions, the plurality of formatters.

Kyle, in the same area of sending data, from a computer system to another computer system, to be formatted by the another computer system, teaches together with the unformatted data portions, (420, fig. 4) a plurality of formatters (416, fig. 4) for formatting the unformatted data portions.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's method of formatting data to include: providing, together with the unformatted data portions, the plurality of formatters.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's method of formatting data by the teaching of Kyle because of the following reasons: (a) it would have prevented the computer of Kageyama from "hang" when the computer doesn't have the formatter prepared for formatting the data received as taught by Kyle at column 1, lines 52-60; and (b) it would have prevented the formatter from consuming Kageyama's computer resources as taught by Kyle at column 2, lines 1-6.

With respect to applicant's argument that Neither Kageyama not Nagasaka teaches providing unformatted data to each of the viewers and providing a plurality of formatters to a format viewable by each of the viewers.

In reply: Kageyama teaches a method of presenting data (document data, column 4, lines 45-51) to a viewer (command processing part, 163, column 6, lines 43-47), comprising the steps of: providing unformatted data (non converted document data, that is transmitted from terminals, column 4, lines 46-51, which is to be converted, column 8, lines 11-20) to the viewer, the unformatted data including a plurality of unformatted data portions (e.g., the unconverted data 1521, 1522, column 6, lines 25-35); providing a plurality of formatters, (conversion programs, column 8, lines 10-20) each of which is capable of formatting one or more unformatted data portions (printing command in the document data, column 8, lines 10-15) into at least one format (the format of the common command, column 8, lines 15-17; since the common command is converted from the printing command; inherently, the common command and the printing command are in different format) viewable (executable by the command processing part, column 8, lines 11-16, column 6, lines 43-47) to the viewer.

Kageyama does not teach presenting data to a plurality of viewers such that all of the unformatted data portion can be formatted at relevant viewers.

Nagasaka, in the same area of formatting data (converting intermediate code into raster image, column 7, lines 5-10) portions (column 6, lines 59-60) using a viewer (PDL parallel processing interpreter, column 29, lines 50-52, column 5, lines 43-50) running other programs (e.g., rasterizer 212, column 7, lines 9, column 5, lines 43-45) used to

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format the unformatted data, (intermediate code) teaches sending data portions (intermediate code portions, column 6, lines 59-60) to a plurality of viewers (PDL parallel processing interpreter, column 6, lines 1-67, column 7, lines 1-4) such that all of the unformatted data portion (intermediate code portions) can be formatted at relevant viewers (Column 7, lines 5-15) at the same time. (Column 6, lines 25-30)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's presenting data method to include: presenting data to a plurality of viewers such that all of the unformatted data portion can be formatted at relevant viewers at the same time.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's data presenting method by the teaching of Nagasaka because of the following reasons: (a) it would have allowed Kageyama's data processing to realize a high speed and high density processing, as taught by Nagasaka at column 2, lines 18-20, especially when the viewer is implemented in software, Nagasaka, column 2, lines 5-17; and (b) it would have reduced the memory required to store the formatted data for the viewer as taught by Nagasaka at column 2, lines 20-27.

With respect to applicant's argument that Kageyama does not teach conversion means that are separately located from the viewer for converting the unformatted data portions into a format viewable to the viewer, has been considered.

In reply: Kageyama teaches a system (print server 14, column 5, line 17) for formatting (converting, column 8, lines 12-15) unformatted data (document data before

conversion, column 8, lines 13-15) having one or more unformatted portions (document data 1521, 1522, column 6, lines 25-30) to be viewable (executable by the command processing part, column 8, lines 11-16, column 6, lines 43-47) to a viewer, (command processing part, column 8, line 13) comprising: conversion means (command conversion programs, column 8, lines 15-20, and the memory that store the command conversion means; inherently a program is located in a memory) for converting the unformatted data portions (document data before conversion, column 8, lines 13-15, e.g., document data 1521, 1522, column 6, lines 25-30) into a format (the format of the common command, column 8, lines 14-15; since the common command is converted from the printing command; inherently, the common command and the printing command are in different data format) viewable to the viewer.

Kageyama, in the embodiment cited, does not teach the conversion means being separately located from the viewer.

However, Kageyama, fig. 4, (another embodiment) teaches command processing programs (16A1-16A3) run by the viewer/command processing part (163a) are being separately located from the viewer to reduce the memory requirement of the command processing part. (Column 9, lines 10-16, column 9, lines 40-45)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's command processing part to include: the conversion means being separately located from the viewer.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Kageyama's command processing part because

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of the following reasons: (a) it would have reduced the memory requirement for storing the command processing part/software, and (b) reduce in memory would reduce the cost of implementing the viewer.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to King Y. Poon whose telephone number is (703) 305-0892

April 15, 2004

King Y. Poon